

## ENCLOSURE 2

M200090

Response to Request for Additional Information eRAI 9745

Licensing Topical Report  
NEDC-33911P, Revision 0,  
BWRX-300 Containment Performance

Non-Proprietary Information

### **IMPORTANT NOTICE**

This is a non-proprietary version of the BWRX-300 Reactor Pressure Vessel Isolation and Overpressure Protection Licensing Topical Report, from which the proprietary information has been removed. The header of each page in this enclosure carries the notation “Non-Proprietary Information.” Portions of the enclosure that have been removed are indicated by an open and closed bracket as shown here [[                      ]].

**eRAI No.: 9745**

**Date of eRAI Issue: 06/22/20**

---

**NRC Question 03.09.06-15**

SER Section 3.9.6: NRC Standard Review Plan (SRP) Section 3.9.6 specifies that the NRC staff will review the functional design, qualification, and inservice testing (IST) program for pumps, valves, and dynamic restraints to perform their design-basis safety functions. The NRC regulations in 10 CFR Part 50, Appendices A and B, and 10 CFR 50.55a include requirements for the capability of pumps, valves, and dynamic restraints to perform their safety functions. Section 2.2.7, “Containment Isolation Valves,” in NEDC-33911 describes the various containment isolation valves (CIVs) used in the BWRX-300 nuclear power plant. The capability of CIVs to perform their design-basis functions is safety significant to provide assurance that the containment of the BWRX-300 reactor can be safely isolated and prevent radioactive release to the environment that exceeds regulatory requirements. In accordance with 10 CFR Part 50, Appendix A, GDC 1, 2, 4, 54, 55, 56, and 57 for the various CIVs to be used in the BWRX-300, the NRC staff requests the following:

- (a) Any first of a kind (FOAK) features,
- (b) Valve and actuator types,
- (c) Valve size,
- (d) Qualification, such as compliance with ASME Standard QME-1-2007 (or later edition) as accepted in NRC Regulatory Guide 1.100,
- (e) Plans for valve and actuator diversity,
- (f) Incorporation of lessons learned from CIV performance,
- (g) Accessibility for inservice testing (IST) activities in accordance with 10 CFR 50.55a,
- (h) Design features to avoid thermal binding or pressure locking of the valves, as applicable, and
- (i) OM Code leakage classification.

If any of this information is not available at this time, the NRC staff requests that GEH explain its plans to provide this information during future licensing activities for the BWRX-300 nuclear power plant.

---

**GEH Response to NRC Question 03.09.06-15**

Although detailed design of the BWRX-300 containment isolation valves (CIVs) has not yet been completed, the design functions and features of the CIVs are anticipated to be similar to what is described in Section 6.2.4 of the Economically Simplified Boiling Water Reactor (ESBWR) CIVs described in Design Control Document (DCD) Tier 2, 26A6642AT. Compliance to the requirements of 10 CFR Part 50, Appendix A, GDC 1, 2, 4, 54, 55, 56, and 57 for the various CIVs to be used in the BWRX-300 is anticipated to be the same as what is described in Section 6.2.4 of the ESBWR DCD.

Response to BWRX-300 Request for Additional Information (eRAI) 9745  
GEH Proprietary Information – Non-Public

- (a) GEH does not anticipate any FOAK features for the BWRX-300 CIVs. If any FOAK features are identified during the CIV detailed design, they will be specified during future licensing activities.
- (b) Valve and actuator types will be addressed in the detailed design of the valves.
- (c) Valve size will be addressed in the detailed design of the valves and will be specified during future licensing activities.
- (d) Qualification, such as compliance with ASME Standard QME-1 as endorsed by NRC Regulatory Guide (RG) 1.100, will be addressed in the detailed design and the procurement process of the valves, and will be specified during future licensing activities.
- (e) As described in Licensing Topical Report (LTR) NEDC-33911P, Section 5.1.22, for penetrations where RPV isolation valves are credited as one of the containment isolation valves, diversity for the RPV automatic actuation signals is accomplished by actuation from separate and diverse control systems that are single failure proof. In other penetrations where two containment isolation valves are used that have automatic isolation, diverse actuation signals are applied to ensure the function is achieved. NEDC-33911P, Section 2.2.7, Design Requirements, will be revised to address diversity of CIVs. Detailed design of the CIVs will be specified during future licensing activities.
- (f) Incorporation of lessons learned from international operating experience for CIVs will be addressed in the detailed design of the valves and will be specified during future licensing activities.
- (g) Accessibility for IST activities in accordance with 10 CFR 50.55a will be addressed in the detailed system design layout of the valves and will consider IST requirements like those described in ESBWR DCD, Tier 2, 26A6642AK, Rev. 10, April 2014, Table 3.9-8. The CIV design features are to be designed using the standards approved in 10 CFR 50.55a(a) in effect within six months of any license application, either by GEH in support of a 10 CFR 52 DCA or by a license applicant for requesting a CP and OL under 10 CFR 50 or COL under 10 CFR 52. The specific IST requirements for the BWRX-300 design will be specified during future licensing activities.
- (h) Design features to avoid thermal binding or pressure locking of the valves are not necessary for the BWRX-300 CIVs. The safety function of the CIVs, with exception of the isolation condenser valves that fail as is, is to close as opposed to having an opening safety function. Automatic actuation of the CIVs performs the function of mitigating the effects of a LOCA, AOOs, and IEs. Detailed valve design will consider the potential for excess internal pressurization due to accident conditions heating of the valves and their actuator mechanisms, and any effected CIV design will be provided the necessary and appropriate overpressure protection.

NEDC-33911P will be revised to include a discussion for Generic Letter 95-07, Pressure Locking and Thermal Binding of Safety-Related Power-Operated Gate Valves, as this operating experience may be applicable to the detailed design of the CIVs. However, the specific IST requirements for the BWRX-300 CIV design will be specified during future licensing activities.
- (i) ASME OM code leakage requirements will be ASME OM paragraph ISTC-1300. The BWRX-300 containment isolation valves are expected to have specified leakage criteria, and

are expected to fall under Category A requirements of the OM Code. However, there may be some valves designated at Category C, such as relief valves or check valves, when the individual system designs are performed. The OM Category assignments will be confirmed during the detailed system design and the valve accessories will be designed and selected accordingly with the appropriate leakage requirements applied for their CIV isolation function. The specific OM code leakage requirements for the BWRX-300 design will be specified during future licensing activities.

---

### **Proposed Changes to NEDC-33911P, Revision 0**

NEDC-33911P, Revision 0, will be revised to reflect the addition of new bullet to Subsection 2.2.7 for valve diversity and Subsection 5.5.2 that addresses design features to avoid thermal binding discussed in Generic Letter 95-07:

...

#### **2.2.7 Containment Isolation Valves**

...

Design Requirements:

...

- Diversity for penetrations where RPV isolation valves are credited as one of the containment isolation valves is accomplished by actuation from separate and diverse control systems that are single failure proof. In other penetrations where two containment isolation valves are used that have automatic isolation, diverse actuation signals are applied to ensure the function is achieved.

...

#### **5.5.2 Generic Letter 95-07**

Generic Letter 95 07, Pressure Locking and Thermal Binding of Safety Related Power Operated Gate Valves, dated August 17, 1995, contains a request to ensure that safety related power operated gate valves that are susceptible to pressure locking or thermal binding are evaluated to ensure they are capable of performing the safety functions described in the licensing basis. This guidance will be evaluated for applicability during future licensing activities.

**eRAI No.: 9745**

**Date of eRAI Issue: 06/22/20**

---

**NRC Question 03.09.06-16**

SER Section 3.9.6: NRC Standard Review Plan (SRP) Section 3.9.6 specifies that the NRC staff will review the functional design, qualification, and inservice testing (IST) program for pumps, valves, and dynamic restraints to perform their design-basis safety functions. The NRC regulations in 10 CFR Part 50, Appendices A and B, and 10 CFR 50.55a include requirements for the capability of pumps, valves, and dynamic restraints to perform their safety functions. Section 2.2.8, “Passive Containment Cooling System (PCCS),” in NEDC-33911 provides an overview description of the PCCS for the BWRX-300 that [[  
]]. The PCCS provides a [[

]]. However, the topical report is not clear regarding the use of valves or pumps in the PCCS. In accordance with 10 CFR Part 50, Appendix A, GDC 1, 2, 4, 54, 55, 56, and 57, the NRC staff requests that GEH describe any valves or pumps that are part of the PCCS for the BWRX-300, and their design and qualification.

---

**GEH Response to NRC Question 03.09.06-16**

The BWRX-300 PCCS does not employ the use of any valves or pumps to perform their design-basis safety function as described in LTR NEDC-33911P, Subsection 2.2.8.

---

**Proposed Changes to NEDC-33911P, Revision 0**

None

**eRAI No.: 9745**

**Date of eRAI Issue: 06/22/20**

---

**NRC Question 03.09.06-17**

SER Section 3.9.6: Section 5.1.1, “10 CFR 50.34(f),” in NEDC-33911 discusses compliance with specific requirements in 10 CFR 50.34(f) related to the TMI-2 accident lessons learned. In describing compliance with 10 CFR 50.34(f)(2)(xiv) with respect to containment isolation systems, NEDC-33911 indicates that the CIVs do not reopen on resetting of the signals. NRC Standard Review Plan (SRP) Section 3.9.6 specifies that the NRC staff will review the functional design, qualification, and inservice testing (IST) program for pumps, valves, and dynamic restraints to perform their design-basis safety functions. The NRC regulations in 10 CFR Part 50, Appendices A and B, and 10 CFR 50.55a include requirements for the capability of pumps, valves, and dynamic restraints to perform their safety functions. The capability of CIVs to perform their design-basis functions is safety significant to provide assurance that the containment of the BWRX-300 reactor can be safely isolated and prevent radioactive release to the environment that exceeds regulatory requirements. The NRC staff requests that GEH clarify how the CIV designs will prevent valve disc movement during their long-term isolation function.

---

**GEH Response to NRC Question 03.09.06-17**

The detailed design of the containment isolation valves, and valve actuators has not been completed. Positive mechanical means shall be required in the design of the valve actuators to ensure that upon automatic actuation or a loss of signal or control power to both valves, the valves will be maintained in the required post-accident valve positions. These requirements are to be implemented during detailed design of the valves and actuators. Therefore, additional information requiring the use of positive mechanical means in the design of the valve actuators to maintain these valves in their required post-accident valve positions will be added to NEDC-33911P.

---

**Proposed Changes to NEDC-33911P, Revision 0**

NEDC-33911P, Revision 0, Subsection 2.2.7 will be revised to add the design requirements for the use of positive mechanical means in the design of the valve actuators to maintain these valves in their required post-accident valve positions:

...

**2.2.7 Containment Isolation Valves**

...

Design Requirements:

...

- [The CIV isolation valves for main steam line, feedwater, shutdown cooling, and reactor water cleanup shall fail in the closed position, with valve actuators designed to maintain the valves closed by positive mechanical means.](#)

Response to BWRX-300 Request for Additional Information (eRAI) 9745  
GEH Proprietary Information – Non-Public

- [[ ]] with valve actuators designed to maintain the valves in their as-is position by positive mechanical means.
- All other CIV penetration configurations will be designed with valve actuators with positive mechanical means to ensure that upon automatic actuation or a loss of signal or control power to both valves, the valves will be maintained in the required post-accident valve position.

**eRAI No.: 9745**

**Date of eRAI Issue: 06/22/20**

---

**NRC Question 03.09.06-18**

SER Section 3.9.6: NRC Standard Review Plan (SRP) Section 3.9.6 specifies that the NRC staff will review the functional design, qualification, and inservice testing (IST) program for pumps, valves, and dynamic restraints to perform their design-basis safety functions. The NRC regulations in 10 CFR Part 50, Appendices A and B, and 10 CFR 50.55a include requirements for the capability of pumps, valves, and dynamic restraints to perform their safety functions. The NRC staff review under SRP Section 3.9.6 includes planned alternatives and their safety significance to the editions and addenda of the ASME *Boiler and Pressure Vessel Code* (BPV Code) and ASME *Operation and Maintenance of Nuclear Power Plants* (OM Code). Section 5.2, “Regulatory Guides,” in NEDC-33911 does not discuss NRC Regulatory Guide (RG) 1.84, RG 1.147, or RG 1.192, as they relate to the acceptability of Code Cases for the ASME BPV Code and ASME OM Code for design, inservice inspection, and IST activities in satisfying 10 CFR 50.55a, respectively. The NRC staff requests GEH to clarify the intent of the topical report regarding these RGs.

---

**GEH Response to NRC Question 03.09.06-18**

NEDC-33911P will be revised to describe conformance to the regulatory guidance of RG 1.84, RG 1.147 and RG 1.192. The BWRX-300 will conform to the guidance and regulatory positions of RG 1.84, Revision 38, and using the guidance conformance described in the ESBWR DCD Tier 2, 26A6642AD, Table 1.9-21 to RG 1.84, Rev. 33. ASME BPV Code Case N-782 is also applied to the BWRX-300. Code Case N-782 endorses the use of the Edition and Addenda of ASME Boiler and Pressure Vessel Code Section III, Division 1, as an alternative to the requirements of Code paragraphs NCA-1140(a)(2)(a) and NCA-1140(a)(2)(b). Justification for application of this Code case will be provided in the BWRX-300 Preliminary Safety Analysis Report (PSAR) or future licensing activities. Regulatory Guide 1.147, Rev. 19, the requirements of ASME B&PV Code Section XI, Division 1, specifically apply during construction and operations activities of nuclear power plants for performance of inservice inspection activities, and RG 1.192, Rev. 3, the requirements of ASME OM Code, specifically apply during operations and maintenance activities of nuclear power plants for performance of inservice testing activities. However, GEH design process and associated administrative controls considers operating plant compliance to RG 1.147 and RG 1.192 guidance in performing examinations, inspections and tests of installed systems and components and are incorporated in the design review process to support plant operation and maintenance best practices. Therefore, the guidance of RG 1.184, RG 1.147 and RG 1.192 will be considered in the BWRX-300 design phase in meeting the requirements of 10 CFR 50.55a.

---

**Proposed Changes to NEDC-33911P, Revision 0**

NEDC-33911P, Revision 0, will be revised to address the addition of Regulatory Guides 1.84, 1.147 and 1.192 as they relate to the acceptability of ASME Code Cases:

...

### **5.2.3 Regulatory Guide 1.84**

RG 1.84, Design, Fabrication and Materials Code Case Acceptability, ASME Section III, Rev. 38, describes the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section III, “Rules for Construction of Nuclear Power Plant Components” Code Cases that the U.S. NRC has approved for use as voluntary alternatives to the mandatory ASME BPV Code provisions that are incorporated by reference into Title 10 of the Code of Federal Regulations (10 CFR), Part 50, “Domestic Licensing of Production and Utilization Facilities.” This RG applies to reactor licensees subject to 10 CFR Part 50, Section 50.55a, “Codes and standards”.

The BWRX-300 design conforms to the guidance, including the regulatory positions of RG 1.84, Rev. 38, and using the guidance conformance to RG 1.84, Rev. 33 described in ESBWR DCD Tier 2, 26A6642AD, Revision 10, Section 1.9.2, Table 1.9-21, and Table 5.2-4. ASME BPV Code Case N-782 is also applied to the BWRX-300. Code Case N-782 endorses the use of the Edition and Addenda of ASME Boiler and Pressure Vessel Code Section III, Division 1, as an alternative to the requirements of Code paragraphs NCA-1140(a)(2)(a) and NCA-1140(a)(2)(b). Justification for application of this Code case will be provided in the BWRX-300 Preliminary Safety Analysis Report (PSAR) or future licensing activities.

...

### **5.2.34 Regulatory Guide 1.141**

...

### **5.2.5 Regulatory Guide 1.147**

RG 1.147, Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1, Rev. 19, lists the ASME B&PV Section XI Code Cases that the NRC has approved for use as voluntary alternatives to the mandatory ASME B&PV Code provisions that are incorporated by reference into 10 CFR 50. This applies to reactor licensees subject to 10 CFR 50.55a, Codes and Standards. These ASME B&PV Section XI Code Cases are acceptable to the NRC Staff for use in implementing the regulatory requirements of 10 CFR 50 Appendix A, GDC 1, Quality standards and records, and 10 CFR 50 Appendix A, GDC 30, Quality of reactor coolant pressure boundary, and the requirements of 10 CFR 52.79(a)(11) which requires the final safety analysis report to include “a description of the program(s), and their implementation, necessary to ensure that the systems and components meet the requirements of the ASME Boiler and Pressure Vessel Code and the ASME Code for Operation and Maintenance of Nuclear Power Plants in accordance with 50.55a of this chapter.” In 10 CFR 50.55a(a)(1)(ii), the NRC references the latest editions and addenda of ASME B&PV Code Section XI that the agency has approved for use.

Section 4.1.3 of LTR NEDC-33910P, Revision 0, Supplement 1, describes how the design of the RCPB, including the ICS and RPV isolation valves, complies with the requirements of 10 CFR 50.55a. The requirements of ASME B&PV Code Section XI, Division 1, specifically apply during construction and operation activities of nuclear power plants for performance of inservice inspection activities. The GEH design process and associated administrative controls considers operating plant compliance to RG 1.147 guidance in performing examinations, inspections and tests of installed systems and components, and are incorporated in the design review process to support plant operation and maintenance best practices. Therefore, compliance with the requirements of 10 CFR 50.55a for the conduct of ISI activities, including the use of ASME B&PV

Section XI Code Cases endorsed in RG 1.147 where necessary, will be demonstrated during future licensing activities.

The guidance of RG 1.147 will be applied to the BWRX 300 design phase in considering the operating plant provisions to perform examinations, inspections and testing of installed systems and components to support plant operation and best maintenance practices to meet the requirements of 10 CFR 50.55a.

...

#### **5.2.46 Regulatory Guide 1.155**

...

#### **5.2.57 Regulatory Guide 1.163**

...

#### **5.2.8 Regulatory Guide 1.192**

RG 1.192, Operation and Maintenance Code Case Acceptability, ASME OM Code, Rev. 3, lists Code Cases associated with the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) that the NRC has approved for use as voluntary alternatives to the mandatory ASME OM Code provisions that are incorporated by reference into 10 CFR 50. This applies to reactor licensees subject to 10 CFR 50.55a, Codes and Standards. These ASME OM Code Cases are acceptable to the NRC Staff for use in implementing the regulatory requirements of 10 CFR 50 Appendix A, GDC 1, Quality standards and records, and 10 CFR 50 Appendix A, GDC 30, Quality of reactor coolant pressure boundary, the requirements of 10 CFR 50.55a(f) which requires, in part, that Class 1, 2, and 3 components and their supports meet the requirements of the ASME OM Code or equivalent quality standards, and the requirements of 10 CFR 52.79(a)(11) which requires the final safety analysis report to include “a description of the program(s), and their implementation, necessary to ensure that the systems and components meet the requirements of the ASME Boiler and Pressure Vessel Code and the ASME Code for Operation and Maintenance of Nuclear Power Plants in accordance with 50.55a of this chapter.” In 10 CFR 50.55a(a)(1)(iv), the NRC references the latest editions and addenda of ASME OM Code that the agency has approved for use.

Section 4.1.3 of LTR NEDC-33910P, Revision 1, describes how the design of the RCPB, including the ICS and RPV isolation valves, complies with the requirements of 10 CFR 50.55a. The requirements of ASME OM Code specifically apply during operation and maintenance activities of nuclear power plants for performance of IST activities. GEH design process and associated administrative controls considers operating plant compliance to RG 1.192 guidance in performing examinations, inspections and tests of installed systems and components, and are incorporated in the design review process to support plant operation and maintenance best practices. Therefore, compliance with the requirements of 10 CFR 50.55a for the conduct of IST activities, including the use of ASME OM Code Cases endorsed in RG 1.192 where necessary, will be demonstrated during future licensing activities.

The guidance of RG 1.192 will be applied to the BWRX 300 design phase in considering the operating plant provisions to perform examinations, inspections and testing of installed systems and components to support plant operation and best maintenance practices to meet the requirements of 10 CFR 50.55a.

**eRAI No.: 9745**

**Date of eRAI Issue: 06/22/20**

---

### **NRC Question 03.09.06-19**

SER Section 3.9.6: NRC Standard Review Plan (SRP) Section 3.9.6 specifies that the NRC staff will review the functional design, qualification, and inservice testing (IST) program for pumps, valves, and dynamic restraints to perform their design-basis safety functions. The NRC regulations in 10 CFR Part 50, Appendices A and B, and 10 CFR 50.55a include requirements for the capability of pumps, valves, and dynamic restraints to perform their safety functions. Section 5.3, “NUREG-0800 Standard Review Plan Guidance,” in NEDC-33911 does not address the plans to satisfy SRP Section 3.9.6 for the functional design, qualification, and IST programs for pumps, valves, and dynamic restraints, to provide assurance of their design-basis capability. The NRC staff requests GEH to clarify the intent of the topical report regarding SRP Section 3.9.6.

---

### **GEH Response to NRC Question 03.09.06-19**

NEDC-33911P did not describe conformance to the regulatory guidance of SRP 3.9.6 and will be revised to include this information. The BWRX-300 containment isolation valves, which includes the RPV isolation valves, are to be designed using the standards approved in 10 CFR 50.55a(a) in effect within six months of any license application, including any application for a construction permit under 10 CFR 50 or design certification application under 10 CFR 52. These requirements are to be implemented during detailed design of the safety-related components. Therefore, the conclusion of this additional information to be provided is that the existing SRP provides adequate guidance to use during future review of a BWRX-300 10 CFR 52 design certification application if pursued (as required by 10 CFR 52.47(a)(9)), or for future 10 CFR 50 license applications.

---

### **Proposed Changes to NEDC-33911P, Revision 0**

NEDC-33911P, Revision 0, will be revised to add the following new Subsection 5.3.1:

...

#### **5.3.1 Standard Review Plan 3.9.6**

Standard Review Plan (SRP) 3.9.6, Functional Design, Qualification, and Inservice Testing Programs for Pumps, Valves, and Dynamic Restraints, Rev. 4, states that the areas of review include the functional design and qualification provisions and IST programs for safety-related pumps, valves, and dynamic restraints (snubbers) designated as Class 1, 2, or 3 under ASME B&PV Code Section III. The review includes other pumps, valves and dynamic restraints not categorized as ASME BPV Code Class 1, 2 or 3 that have safety-related function. Conformance with the specific guidance in Subsection II of this SRP section will provide reasonable assurance that the functional design and qualification of pumps, valves and dynamic restraints within the scope of this SRP section and their associated IST programs satisfy the applicable requirements of Section 50.55a, “Codes and Standards,” of Title 10 of the *Code of Federal Regulations*, particularly the IST program requirements of the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) 4; General Design Criterion (GDC) 1, “Quality Standards and

Records,” GDC 2, “Design Bases for Protection against Natural Phenomena,” GDC 4, “Environmental and Dynamic Effects Design Bases,” GDC 14, “Reactor Coolant Pressure Boundary,” GDC 15, “Reactor Coolant System Design,” GDC 37, “Testing of Emergency Core Cooling System,” GDC 40, “Testing of Containment Heat Removal System,” GDC 43, “Testing of Containment Atmosphere Cleanup Systems,” GDC 46, “Testing of Cooling Water System,” and GDC 54, “Systems Penetrating Containment,” in Appendix A, “General Design Criteria for Nuclear Power Plants,” to 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities;” Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants,” to 10 CFR Part 50; 10 CFR 52.47(b)(1), 10 CFR 52.79(a)(11), and 10 CFR 52.80(a).

The containment isolation valves are to be designed using the standards approved in 10 CFR 50.55a(a) in effect within six months of any license application, including any application for a construction permit under 10 CFR 50 or design certification application under 10 CFR 52. The requirements of 10 CFR 50.55a, are to be implemented during detailed design of the safety-related components of containment isolation. Therefore, the existing SRP provides adequate guidance to use during future review of a BWRX-300 10 CFR 52 design certification application if pursued (as required by 10 CFR 52.47(a)(9)), or for future 10 CFR 50 license applications.

...

**eRAI No.: 9745**

**Date of eRAI Issue: 06/22/20**

---

### **NRC Question 03.09.06-20**

SER Section 3.9.6: NRC Standard Review Plan (SRP) Section 3.9.6 specifies that the NRC staff will review the functional design, qualification, and inservice testing (IST) program for pumps, valves, and dynamic restraints to perform their design-basis safety functions. The NRC regulations in 10 CFR Part 50, Appendices A and B, and 10 CFR 50.55a include requirements for the capability of pumps, valves, and dynamic restraints to perform their safety functions. Section 5.4, “Generic Issues,” and Section 5.5, “Operational Experience and Generic Communications,” in NEDC-33911 only discusses two items with respect to these topics. As part of its SRP Section 3.9.6 review, the NRC staff evaluates the consideration of safety significant aspects of generic issues, operational experience, and generic communications for the functional design, qualification, and IST programs for pumps, valves, and dynamic restraints to provide assurance that those components are capable of performing their design-basis functions. The NRC staff requests that GEH clarify that an up-to-date evaluation of generic issues, and operational experience and generic communications, will be provided during future licensing activities under 10 CFR Part 50 or Part 52.

---

### **GEH Response to NRC Question 03.09.06-20**

Sections 5.4 and 5.5 of NEDC-33911P do not represent the total listing required to support a 10 CFR 52 design certification application if pursued or for future 10 CFR 50 license applications and are provided based upon their relevance to the scope of this LTR. Therefore, NEDC-33911P will be revised to include a discussion in each section identifying the limited scope of this evaluation, and committing to the up-to-date evaluation of these issues to be provided during future licensing activities in support of a BWRX-300 10 CFR 52 design certification application or for future 10 CFR 50 license applications.

---

### **Proposed Changes to NEDC-33911P, Revision 0**

NEDC-33911P, Revision 0, will be revised to include the following changes to Section 5.4 and Section 5.5:

...

#### **5.4 Generic Issues**

The following generic issues ~~do not represent the total listing required to support a 10 CFR 52 DCA if pursued or for future 10 CFR 50 license applications but~~ are provided based on their relevance to the scope of this LTR, and an up-to-date evaluation of generic issues is to be provided during future licensing activities either by GEH in support of a 10 CFR 52 DCA or by a license applicant requesting a CP and OL under 10 CFR 50 or COL under 10 CFR 52.

...

## 5.5 Operational Experience and Generic Communications

The following operational experience and generic communications ~~do not represent the total listing required to support a 10 CFR 52 DCA if pursued or for future 10 CFR 50 license applications but are~~ provided based on their relevance to the scope of this LTR, and an up-to-date evaluation of operational experience and generic communications is to be provided during future licensing activities either by GEH in support of a 10 CFR 52 DCA or by a license applicant for requesting a CP and OL under 10 CFR 50 or COL under 10 CFR 52.

...